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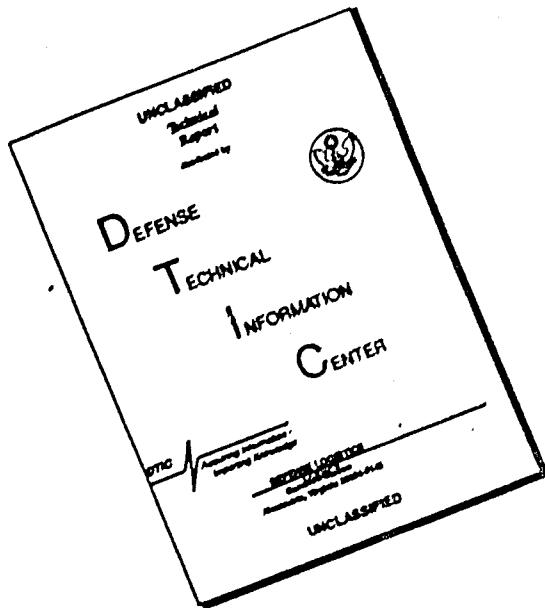
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WASHINGTON, D.C. 20310

IN REPLY REFER TO
AGAM-P (M)(18 Apr 68) FOR OT RD 681221

29 April 1968

SUBJECT: Operational Report - Lessons Learned, Headquarters,
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1. Subject report is forwarded for review and evaluation in accordance with paragraph 5b, AR 525-15. Evaluations and corrective actions should be reported to ACSFOR OT RD, Operational Reports Branch, within 90 days of receipt of covering letter.
2. Information contained in this report is provided to insure appropriate benefits in the future from lessons learned during current operations and may be adapted for use in developing training material.

BY ORDER OF THE SECRETARY OF THE ARMY:

Kenneth G. Wickham

KENNETH G. WICKHAM
Major General, USA
The Adjutant General

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DEPARTMENT OF THE ARMY
HEADQUARTERS, 92D ENGINEER BATTALION
AFO 96491

3
EGBT-O

1 February 1968

SUBJECT: Operational Report - Lessons Learned (CS CSFOR - 65) for Quarterly Period Ending 31 January 1968

THRU: Commanding Officer, 159th Engineer Group, ATTN: 4GB-3, AFO 96491
Commanding General, 20th Engineer Brigade, ATTN: AVBL-O-N, AFO 96491
Commanding General, United States Army Engineer Command, Vietnam, (Provisional), ATTN: AVCC-P&O, AFO 96491
Commanding General, United States Army, Vietnam, ATTN: AVHGC-LH, AFO 96375
Commander-in-Chief, United States Army, Pacific, ATTN: GHOF-OT, AFO 96558

TO: Assistant Chief of Staff for Force Development
Department of the Army (ACSFOR DA)
Washington, D.C. 20310

Section 1. Significant Organization or Unit Activities:

1. Command:

a. This report covers the following headquarters and units with arrival and operational dates in the theater as indicated:

<u>UNIT</u>	<u>ARRIVAL</u>	<u>OPERATIONAL</u>
92d Engr Bn (Const) (less Co I)	23 May 1967	30 May 1967
Co D, 92d Engr Bn (Const)	21 February 1967	25 February 1967
41st Engr Co (Port Const)	2 February 1967	9 February 1967

b. Mission:

(1) The mission of the 92d Engineer Battalion is to construct and rehabilitate roads, airfields, pipeline systems, structures, and utilities.

(2) The mission of the 41st Engineer Company (Port Construction) is to perform special engineering work involved in providing port, beach, and POL facilities in support of military operations.

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c. Assignment: The 92d Engineer Battalion is assigned to the 159th Engineer Group, located at Long Binh, Republic of Vietnam, and is a subordinate element of the 20th Engineer Brigade, and US Army Engineer Command, Vietnam, (Provisional). Several elements of the battalion are located off Long Binh Post. Two platoons from the 41st Engineer Company are located at Phu Cuong, Republic of Vietnam. The quarry section of Company A is located at Xom Tam, Republic of Vietnam. The earthmoving platoon of Company D is located at Di An, Republic of Vietnam.

d. Movement, Attachments, and Detachments: The 41st Engineer Company (Port Construction) was attached to this battalion for operation, administration, training and military justice effective 1 January 1968. The authority is General Order #34, Headquarters, 159th Engineer Group (Construction), dated 18 December 1967.

e. Visitors and Awards:

(1) Visitors: The following visitors were given an official briefing and/or tour of battalion projects during the reporting period:

8 Nov 67: BG C. W. Chapman, CG, 20th Engr Bde
9 Nov 67: BG A. P. Rollins, Jr., Dir of Const, MACV
22 Nov 67: COL W. J. Talbott, Dep Cmdr, 20th Engr Bde
5 Dec 67: BG Dalrymple, Office of DCS/LOG, DA
11 Dec 67: BG C. W. Chapman, CG, 20th Engr Bde
1 Jan 68: COL W. J. Talbott, Dep Cmdr, 20th Engr Bde
10 Jan 68: COL K. T. Sawyer, Dep Cmdr, USAECV(1)
15 Jan 68: COL H. C. Jones, CO, 159th Engr Gp

(2) Awards: The following individual awards were presented to members of the 92d Engineer Battalion during the reporting period.

(a) Bronze Star Medal: 2 - Achievement, 7 - Service
(b) Army Commendation Medal: 30 - Achievement, 24 - Service
(c) Purple Heart Medal: 3

2. Personnel, Administration, Morale, and Discipline:

a. Personnel: The battalion is organized under TO&E 5-115E. The 41st Engineer Company (PC) is organized under TO&E 5-129E. The consolidated strength figures for the reporting period are as follows:

	<u>OFF</u>	<u>WO</u>	<u>EM</u>	<u>TOTAL</u>
(1) 30 Nov 67				
Authorized:	31	7	867	905
Assigned:	29	6	783	818

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	<u>OFF</u>	<u>WO</u>	<u>EM</u>	<u>TOTAL</u>
(2) 31 Dec 67				
Authorized:	31	7	867	905
Assigned:	31	10	743	784
(3) 31 Jan 68				
Authorized:	31	7	867	905
Assigned:	31	7	746	784
(4) 31 Jan 68 (41st Engr Co)				
Authorized:	12	1	214	227
Assigned:	8	1	187	196

(5) The battalion was understrength during the full period of this report. The replacement system has failed to meet the necessary strength requirements of this battalion and the 41st Engineer Company (PC).

(a) A definite impact has resulted due to lack of qualified personnel to fill shortages and current vacancies, i.e., 78 Heavy Truck Drivers (MOS 64B20) authorized and 61 assigned. Authorized 7 Medical Aidmen (MOS 94B20) and assigned 4. These examples are further complicated by additional projected losses within the next month with no relief in sight based upon previous replacement trends.

(b) Added impact to the current strengths is anticipated due to approximately 66 EM replacements having been assigned through infusion with other units. These replacements have less than 90 days in country remaining. These replacements have added to the rotational hump in April 1968.

(c) It is felt that a significant impact will result unless the replacement system improves during the next quarter. Estimated battalion strength losses are February - 26; March - 55; April - 220. Estimated losses for the 41st Engineer Company are February - 9; March - 33; and April - 36.

b. Administration: The battalion prepared 86 recurring reports for submission to higher headquarters: 10 daily, 11 weekly, 2 bi-monthly, 49 monthly, 12 quarterly, and two semi-annually. In addition to the recurring reports, many "one time only", and "as required" reports were submitted.

c. Morale:

(1) Tour extensions approved during the reporting period were 63. Total battalion tour extensions approved from 1 August 1967 to 31 January 1968 were

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174. The 41st Engineer Company (FC) had 3 approved extensions during the period subsequent to attachment (1-31 January 1968). The battalion had an 86.3 percent average participation in savings bonds sales and a 61.3 percent average participation in the soldier's deposit program.

(2) During this reporting period this battalion had 129 men go on R&R which accounted for 60% of the allocations received by the battalion.

(3) During the period covered by this report, the battalion had 28 personnel go on special leave. The 41st Engineer Company had 6 men go on special leave during January 1968.

(4) The recreational facilities have improved with the construction of a basketball court in the battalion area. The battalion entered a basketball team in the Long Binh Post League. The team, however, was not able to fulfill its league commitment, because team members who held certain construction skills were required on projects. It is hoped in the future that the games will be held at night.

(5) Effective 15 December 1967, the Battalion Personnel Pay Specialists were attached to the Post Finance Office. The personnel pay responsibility was transferred to Post Finance along with necessary equipment. This transfer was required in compliance to implement the Modified Military Pay System in RVN as directed by the Chief of U. S. Army Finance. The initial transfer had an adverse effect due to increase of discrepancies in individual payments and initial loss of individual personal assistance with excessive delay in processing.

d. Discipline: During the reporting period the battalion has had a total of 6 special courts-martial. A total of 55 company and field grade Article 15s have been administered.

3. Intelligence and Counterintelligence.

a. Intelligence: The combat intelligence functions of the battalion were somewhat limited. Reconnaissance activities were conducted over the two lines of communications (LOC) assigned to the battalion for upgrading and repair. Intelligence information on enemy activities was obtained daily from 159th Engineer Group.

b. Counterintelligence: There were no active counterintelligence assignments for the 92d Engineer Battalion other than routine reporting of significant or unusual activities.

4. Operations and Training:

a. Combat Support Operations: During the period, the 92d Engineer Battalion participation in combat support operations was limited to dump truck support, production of crushed rock for combat units, and maintenance and upgrading of the 1st Infantry Division Main Supply Route between Long Binh, Di An, and Phu Cuong.

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b. Construction Operations:

(1) General: During the period, the primary emphasis for construction changed from base development construction to road and bridge construction within the III Corps Tactical Zone. The battalion continued to construct some facilities at Long Binh and Bien Hoa, such as vehicle hardstands, maintenance facilities, and a petroleum storage facility. However, increasing effort was placed on upgrading 21.5 miles of roadway and construction of three bridges. The bridges included new construction of a 1,002 foot bridge over the Saigon River at Phu Cuong, and two smaller bridges, 60 feet and 80 feet long to replace tactical bridging that was previously utilized.

(2) Weather: The weather during the period was extremely dry with a little rain falling early in November, followed by virtually no precipitation during the latter part of November, and all of December and January. As a result, no construction was hindered by weather and earthmoving projects required large applications of water to maintain the moisture contents required for adequate compaction. The total monthly rainfall recorded at the battalion headquarters in Long Binh were as follows:

- (a) November 1967: 4.65 inches.
- (b) December 1967: 0.25 inches.
- (c) January 1968: 0.11 inches.

(3) Projects and Related Activities:

(a) Projects Completed This Period:

1. 500 Man Messhall for Headquarters and Headquarters Detachment, 1st Logistical Command, Long Binh Post. This messhall was completed on 10 November 1967, with the expenditure of 4,786 manhours and 572 equipment hours.

2. Billeting Office and Warehouse, Long Binh Post. Construction of two 20' x 108' tropical frame buildings was completed on 20 November 1967, with the expenditure of 3305 manhours and 1035 equipment hours.

3. Alternate Tactical Operations Center, II Field Force, Vietnam. This project, requiring construction of a 17' x 32' timber bunker to house a truck-mounted expandable communications van, for use as an alternate TOC by Headquarters, II Field Force. 520 manhours and 138 equipment hours were required.

4. USARV Special Troops Chapel, Long Binh. This project consisted of a 40' x 100' tropical frame chapel, including interior furniture, for USARV Special Troops. Beneficial occupancy was provided on 23 November 1967, in order that Thanksgiving services could be held in the structure. The extensive interior carpentry was completed on 21 December 1967, in time for Christmas services. The chapel was dedicated on 7 January 1968 by LTG Bruce Falmer, Jr., Deputy Commanding General, USARV. A total of 14,299 U.S. manhours, 136 Vietnamese manhours, and 1,427 equipment hours were required.

5

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5. Sentry Dog Kennels, Long Binh. Two 50 dog kennel buildings, a veterinary clinic with 10 isolation kennels, an administrative building, and a 10,500 gallon water tower comprised this project. 15,771 U. S. manhours, 352 Vietnamese manhours, and 2,829 equipment hours were expended, with completion on 14 December 1967.

6. Quarry Repair Parts Building, Bien Hoa. This project consisted of constructing one 20' x 60' tropical frame parts building for a quarry and crusher site operated by the 46th Engineer Battalion and the 103d Engineer Company (Construction Support). The project required 620 manhours and 40 equipment hours, and was completed on 16 December 1967.

7. Consolidated Motor Pool, 68th Medical Group, Long Binh. This project required construction of 182,500 square feet of laterite hardstand with a peneprime surface to be utilized as a consolidated motor pool. 1,198 cubic yards of spoil material was removed and 7527 cubic yards of laterite were required to construct the area to grade. 4,580 manhours and 3,640 equipment hours were required, with completion on 2 January 1968.

8. Minimum Essential Requirement Construction, 36th Signal Battalion, Long Binh. This project, completed on 4 January 1968, required construction of one 500 man messhall, a water tower, 16,830 square feet of vehicle hardstand, and laterite pads for construction of sixteen barracks and four administrative buildings. 24,490 manhours and 11,081 equipment hours were required and 18, 083 cubic yards of laterite were hauled and compacted.

9. Parking Hardstands for USARV, Long Binh. Three areas of hardstand to be utilized by elements of U. S. Army, Vietnam. The three areas, constructed of laterite with a peneprime surface totaled 97,700 square feet of area. The project required removal of 153,076 cubic yards of spoil material and addition of 66,625 cubic yards of compacted laterite fill.

10. Port Facilities, Dong Tam. This project, constructed by the 41st Engineer Company in support of the 34th Engineer Group, consisted of construction of one LST ramp, one LCU ramp, one ponton barge finger pier providing four barge discharge sites, and bollards for an LST and LCU slip. The project was located at Dong Tam, a new military base located near My Tho in the Mekong Delta. The project was completed on 10 January 1968 with an expenditure of 26,909 manhours and 3,656 equipment hours.

11. POL Tank Farm, Long Binh. This project required construction of eight 10,000 barrel bolted steel POL tanks, two 3,000 barrel tanks, one 250 barrel tank, three truck fill stands, approximately 5 miles of 6 inch pipeline, manifolding and filter systems, three booster pump stations, plus roads, hardstands, and safety berms around the tanks. The project was completed on 27 January 1968 and is in use by the 6th Quartermaster Battalion.

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12. Transportation Motor Pool; U. S. Army Support Command, Saigon; Long Binh. This project, completed on 25 January 1968, consisted of construction of 523,875 square feet of hardstand, one 30' x 300' maintenance building, one 20' x 96' administrative building, a 20' x 40' vehicle inspection office, a 20' x 40' dispatch office, and six security guard towers. 30,850 U. S. manhours, 164 Vietnamese manhours and 16,598 equipment hours were expended on this project.

13. Wiring, 101st Airborne Division Base Camp, Bien Hoa. This project consisted of rewiring of six messhalls, one electrical shop, one maintenance building, five administrative buildings, and three finance buildings, by replacement of improper wiring, installation of new fixtures, and installation of entrance caps. The project was completed on 24 January 1968 with an expenditure of 1675 manhours.

14. Several small task assignments completed during the period included:

a. Construction of retaining wall and concrete foundation pads for a new hot-mix asphalt plant at Long Binh.

b. Installation of obstruction lights at the 20th Engineer Brigade Heliport, Bien Hoa.

c. Repair of a tank gunnery range for the ARVN Armor School, near Honai.

d. Minimum Essential Requirement construction for the 117th Assault Helicopter Company, Bien Hoa.

e. Construction of an access road to the Duc Tu District Headquarters, near Long Binh.

f. Construction of two concrete basketball courts in the main recreation area, Long Binh Post.

(b) Projects Under Construction:

1. Saigon River Bridge at Phu Cuong. This project requires construction of a 1,002 foot two lane bridge over the Saigon River at Phu Cuong in Binh Duong Province. The bridge consists of fourteen 60 foot spans utilizing steel stringer substructure plus two navigation spans of 81 feet each, utilizing pre-stressed concrete girders. The bridge is constructed on twelve inch diameter steel piling driven through prefabricated steel jackets. The average depth of piling, driven to 100 tons bearing capacity, is 200 feet. All substructure construction is by the 41st Engineer Company (Fort Construction) and the superstructure, constructed of precast concrete deck panels, is by Company B, 92d Engineer Battalion. Estimated completion date is 1 June 1968.

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2. Line of Communication Upgrading and Construction. The 92d Engineer Battalion is upgrading and reconstructing an existing military road from Long Binh, through Di An, to Phu Cuong for utilization as a main supply route for both the 1st and 25th Infantry Divisions. The project consists of upgrading the roadway for a 24 foot traveled way, surfaced with a plant mix asphalt pavement, with 8 foot stabilized shoulders on each side. Total distance to be upgraded is 18.7 miles. Two bridges must be constructed to replace existing Vietnamese Eiffel bridges which are of limited capacity. In addition, the battalion has commenced tactical bridge replacement on Route LTL 16, a highway running adjacent to the Dong Nai River from Long Binh to Tan Uyen. One bridge is under construction with four additional bridges to be constructed.

3. 1,000 Man Cantonment, Bien Hoa. The battalion is constructing a cantonment at Bien Hoa Air Base for the 145th Aviation Battalion. This project includes company and battalion administrative buildings, an enlisted men's mess, showers and latrines, storage and warehouse facilities, plus technical assistance for self-help construction of billets by the customer.

4. Aviation Support Facilities, Bien Hoa. This project requires construction of a 54 foot control tower, three technical supply buildings, and two operations buildings. Site preparation only was commenced during the reporting period.

5. Consolidated Motor Pool, 64th Quartermaster Battalion, Long Binh. This project consists of construction of two motor park hardstands, totaling approximately 230,000 square feet of compacted laterite fill with a pene-prime surface. Completion of the first motor pool is scheduled for 20 February 1968, while construction of the second motor pool has been deferred for line of communication construction.

6. Parking Hardstands for USAV, Long Binh. Construction continues on two additional parking hardstands for use by subordinate elements of U. S. Army, Vietnam.

7. Enlisted Men's Club Improvement, Long Binh. This project consists of renovation and expansion of an existing building for use as an Enlisted Men's Club. Estimated completion date is 29 February 1968.

8. Landscaping of USARV and 1st Logistical Command Headquarters, Long Binh. This project requires filling, shaping, and seeding the area adjacent to the recently completed headquarters for U. S. Army, Vietnam and 1st Logistical Command. Most of the construction is by Vietnamese laborers, under the supervision of the battalion.

9. Continuing projects that remained in effect during the period included:

- a. Electrical wiring for tenant units on Long Binh Post.
- b. Operation of a prefabrication Carpenter Shop for construction of 30' x 76' maintenance buildings and other prefabrication work required for battalion projects.

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10. Xom Tam Quarry. The 92d Engineer Battalion continued to operate a quarry and crusher site at Xom Tam, located between Bi An and Bien Hoa. The site includes four 75 tons per hour primary crushers, two 75 tons per hour secondary crushers, and a 75 tons per hour screening plant. The quarry and crushers produce base course for ICC construction, asphalt and concrete aggregate, and crushed rock required for combat support missions. The Rock Processing and Quarry Section of Company A, 92d Engineer Battalion operates the site, with the Rock Processing and Quarry Section of the 62d Engineer Battalion attached to augment the force.

(c) Engineering: The battalion maintains a design and quality control capability within the Operations Section. In addition a seven man survey section provided both preliminary and construction surveys on all projects and a two man soils survey section maintained quality control on all construction materials and earthwork.

5. Logistics.

a. Supply:

(1) During the period of this report, there was no significant change in the level of response from the supply system, as reported in the two previous quarters, to cope with unit demands. The system was extremely slow in filling dated demands for T&E equipment. The depot attempted to meet all requests on a "quantity of need" basis, with the result that units with low on-hand densities received complete fills while units with high densities of particular equipment received little or no fills on shortages.

(2) Certain critical construction materials, most notably all types of electrical supplies, remained in short supply. This problem area appeared to be twofold: First, the depot has been unable to maintain an adequate stock level of critical items, and second, non-construction units may draw on depot stocks with the same priority as those units with a construction mission.

(3) Throughout the period, the battalion was constantly faced with a shortage of repair parts for equipment. The shortage includes parts for both high density and low density equipment, with the greatest problem area in parts for earthmoving, quarry, and crusher equipment. Currently, the most critical shortage is for turbo-chargers and air filters for the Clark 290M tractor and all parts for the Eagle 75 tons per hour crusher units. Also in short supply were 1100 x 20 tires and tubes for 5 ton dump trucks and 900 x 20 tubes for 2-1/2 ton cargo trucks. All these shortages are adversely affecting construction of the line of communications road projects.

b. Maintenance.

(1) A command motor stable is conducted during the 1st hour of each shift for all construction equipment with the new shift performing only the before operations checks on oil, water, fuel, and tires. This was a change from the

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previous practice of conducting motor stables at the start of each shift resulting in a quicker dispatch of equipment and providing the maintenance sections the opportunity to correct minor deficiencies prior to start of the new shift. This has caused a significant reduction in delays in dispatching critical equipment to job sites at the start of a shift.

(2) Assistance from support maintenance activities was good. Close liaison was maintained with the supporting activities which facilitated timely and efficient evacuation and repair of equipment.

6. Force Development: Not applicable.

7. Command Management: Not applicable.

8. Inspector General: The battalion has an Acting Inspector General (AIG) for the purpose of receiving and processing complaints. During the period, no complaints were received. No units of the battalion received their Annual General Inspection during the period, but an Annual General Inspection has been scheduled for 4 - 9 March 1968.

9. Information: The primary source of information on battalion activities is the battalion weekly newspaper, The Dirt Mover. The paper contains articles on all activities of the battalion and the members of the battalion. In addition the battalion receives the following papers: Laterite Lantern, Castle Courier, The Army Reporter, The Observer, and The Stars and Stripes. During the period 15 articles on the battalion were published in these papers, plus the battalion was the subject of two fifteen minute television programs over station WCAX-TV, Burlington, Vermont.

10. Civic Affairs:

a. There was little MEDCAP activity during the reporting period due to a heavy workload of providing medical support to eleven companies with a shortage of medical personnel.

b. Through the Battalion Chaplain, clothing, soap, and other articles received by members of the battalion from civic organizations, churches, and individuals were distributed periodically to members of Cao Thai Refugee Village. In addition, a television set was demonstrated to school children at Cao Thai.

c. Approximately 75 to 100 members of the village are employed daily by the battalion as laborers for maintenance of the battalion area and to work on various battalion construction projects. These laborers are also receiving training as carpenters, masons, and steel-setters.

Section 2, Part I. Observations (Lessons Learned)

1. Personnel: None.

2. Operations:

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SUBJECT: Operational Report - Lessons Learned (RCS CSFOR-65) for Quarterly Period Ending 31 January 1968

a. ITEM: Precasting Concrete Bridge Deck Panels.

DISCUSSION: Construction of the Saigon River Bridge at Phu Cuong required precasting of 672 deck panels for placement as the roadway for the bridge. The panels were precast at Long Binh, utilizing concrete molds for the panels. Two types of panels were required, one a rectangular panel, 4 feet 11-1/2 inches by 6 feet 2-1/2 inches, and the other a curb panel 4 feet 11-1/2 inches by 10 feet 1 inch. Both panels are 1 foot thick around the outer edges, thinning to 6 inches thick in a center "pan" section. Concrete molds were cast in the ground with the male pan section also cast from concrete. Concrete curing compound is then sprayed on the concrete mold to prevent bonding with the concrete of the panel itself. A prefabricated mat of reinforcing steel is then placed on the mold, using bar chairs to maintain proper height above the mold. A stiff mix of concrete, with a specified strength of 3500 psi or greater, is placed in the mold, thereby producing the required deck panels. The deck panels are removed from the mold one to three days after placement, coated with curing compound, and stockpiled for 28 day curing.

OBSERVATION: Use of concrete molds provides a durable and accurate form for repetitive concrete precast work.

b. ITEM: Template for construction of underwater bracing jackets.

DISCUSSION: The 41st Engineer Company is constructing the substructure of the Saigon River Bridge at Phu Cuong, using 12 inch diameter steel pipe piling for the piers. A prefabricated jacket was constructed to act as a template for driving the piling and to provide all underwater lateral bracing on the piers.

The jackets are constructed with either 18 inch or 14 inch diameter steel pipe forming the corner vertical members and 8 inch diameter pipe forming the lateral bracing between vertical members. The length of the vertical member was governed by the elevation of the bridge above the river bottom.

A template was designed to facilitate construction of the jackets. The template was designed so that all four vertical members of the jacket could be placed in the template simultaneously. The lateral bracing of the two side panels are welded to the vertical members, then the side panels are rotated 90 degrees and top and bottom lateral bracing welded in place, completing the jacket. Details of the jacket template are attached as Inclosure 1.

OBSERVATION: Use of the jacket template insures that all jackets are identical and that each individual jacket is square, i.e., all angles are right angles and all spacings are the same. The jacket in turn insures that all piling are driven in the proper location and to the desired elevation.

c. ITEM: Press for construction of pile splicing sleeves.

DISCUSSION: Construction of the substructure for the Phu Cuong Bridge requires driving steel 12 inch cylindrical piling to an average depth of 200 feet. Pile sections are received on site in 50 foot long lengths which requires splicing four pilings together to reach the 200 foot depth. As a result, three splices per pile are required.

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Cylindrical splicing sleeves were not available for 12 inch piling and it was necessary to fabricate splicing sleeves on site. The sleeves were manufactured by cutting a 22 inch long section of 12 inch piling, and then cutting out a three inch slot lengthwise along the round section. This section was then placed in the sleeve press, shown in Inclosure 2. Pressure was exerted against the guide plate with a 12 ton hydraulic jack, which squeezed the section together, closing the three inch slot. After the slot was closed, the sleeve was spot welded to hold the sleeve closed while it was removed from the press.

The closed sleeve was then inserted into one end of a 50 foot pile section where the joint was to be made, leaving about ten inches of the sleeve extending outside the end of the pile. The spot welds were cut, allowing the sleeve to expand against the inside of the piling. The sleeve was then spot welded to the inside of the piling and the piling is then ready to be spliced onto another section.

OBSERVATION: The sleeve press provided an effective means of fabricating splicing sleeves for 12 inch cylindrical piling. The sleeves insured that each new section was aligned with the previously driven section of piling while the new piling was placed on top of the old section and while the splice joint was welded.

3. Training and Organization: None.

4. Intelligence: None.

5. Logistics:

a. ITEM: Issue procedure for construction materials.

DISCUSSION: Timely issue of construction materials from a battalion S-4 supply yard is an important factor in the satisfactory accomplishment of the construction mission. To facilitate issuing of materials, it was found that preparation of unit issue slips could be done on the night preceding the issue date. Unit platoon leaders or company operations personnel coordinate the requirements for issue with the S-4 on the preceding night, thereby insuring that all material is ready for pickup on the morning it is required on site.

OBSERVATION: Preparation of issue slips on the night before issue insures accurate accountability for all material, eliminates double issue, and provides material to the construction unit in a timely manner.

b. ITEM: Submission of a material schedule with a project Bill of Materials.

DISCUSSION: Submission of the material schedule as shown in Figure 157, TM 5-250, in conjunction with a project Bill of Materials provides a planning guide for requisitioning and pickup of materials by the Battalion S-4.

OBSERVATION: The materials schedule assists the S-4 in insuring that all materials are available for issue to the construction unit as materials are required for a project.

12

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1

12

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EGBD-0

SUBJECT: Operational Report - Lessons Learned (RCS CSFOR-65) for Quarterly Period Ending 31 January 1968

6. Other:

ITEM: Litter placement in a Medical Bunker.

DISCUSSION: Construction of a medical bunker is highly desirable for use in the event of enemy attack. The floor space within such a bunker is limited, so a means was devised to suspend litters from the ceiling similar to the method used in medical evacuation aircraft. Straps were suspended from the roof capable of supporting two litters side-by-side, stacked three litters high. A fourth pair of litters rests on the floor. Vertical spacing between litters of 16 inches was provided. The litters were stabilized by litter clamps attached to vertical 4" x 6" roof supports. Locking clamps were utilized on all four corners of each litter.

OBSERVATION: The above arrangement of litters permits eight casualties to occupy the floor space of two, without compromising access to each man.

Section 2, Part II, Recommendations:

None.

2 Incls

1. Jacket Template - 2 sheets
2. Sleeve Press

HARRY W. LOMBARD

LTC, CE

Commanding

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11
EGB-CO (1 Feb 68)

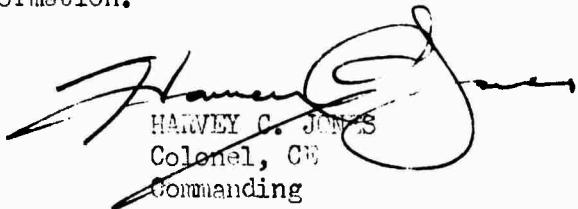
1st Ind

SUBJECT: Operational report-Lessons Learned (RCS CSFCU-65) for Quarterly
Period Ending 31 January 1968

DA, HQ, 159th Engineer Group, AFN 96491 FEB 25 1968

TO: Commanding General, 20th Engineer Brigade, AFN 96491

Forwarded for your information.


HARVEY C. JONES
Colonel, CIV
Commanding

14

AVBI-OS (1 Feb 68) 2nd Ind

SUBJECT: Operational Report - Lessons Learned (RCS CSFOR-65) for
Quarterly Period Ending 31 January 1968

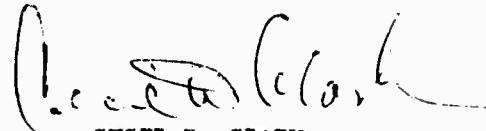
DA, Headquarters, 20th Engineer Brigade, APO 96491 2 March 1968

TO: Commanding General, USAECV(P), ATTN: AVCC-P&O, APO 96491

1. Forwarded for your information and action IAW USAECV(P) Reg 1-19,
dated 15 April 1967.

2. This headquarters concurs with the ORLL submitted by the 92nd
Engineer Battalion.

FOR THE COMMANDER:



CECIL D. CLARK
Major, CE
Adjutant

19

AVCC-P&O (1Feb 68)

3rd Ind

SUBJECT: Operational Report-Lessons Learned (RCS CS 1 OR-65) for Quarterly Period Ending 31 January 1968.

HEADQUARTERS, UNITED STATES ARMY ENGINEER COMMAND
VIETNAM (PROV), APO 96491

15 MAR 1968

TO: Commanding General, United States Army Vietnam, ATTN: AVHCC-DST,
APO 96375

The attached ORLL, submitted by the 92nd Engineer Battalion, has been reviewed by this headquarters and is considered adequate.

FOR THE COMMANDER:

John Tharomas 1LT, AGC
RICHARD B. BIRD
Captain, AGC
Assistant Adjutant General

AVHGC-DST (1 Feb 68)

4th Ind

SUBJECT: Operational Report - Lessons Learned (RCS CSFOR - 65) for
Quarterly Period Ending 31 January 1968

HEADQUARTERS, UNITED STATES ARMY VIETNAM, APO San Francisco 96375 19 MAR 1968

TO: Commander in Chief, United States Army, Pacific, ATTN: GPOF-DT,
APO 96558

1. This headquarters has reviewed the Operational Report-Lessons Learned for the quarterly period ending 31 January 1968 from Headquarters, 92d Engineer Battalion (WBAHAA) as indorsed.

2. Concur with report as indorsed. Report is considered adequate.

3. A copy of this indorsement will be furnished to the reporting unit through channels.

FOR THE COMMANDER:

CHARLES A. BYRD
Major, AGC
Assistant Adjutant General

Copies furnished:

HQ, USAECV (P)
HQ, 92d Engr Bn

21
GPOP-DT (1 Feb 68) 5th Ind

SUBJECT: Operational Report of HQ, 92d Engr Bn for Period Ending
31 January 1968 (RCS CSFOR-65)

HQ, US Army, Pacific, APO San Francisco 96558 20 MAR 1968

TO: Assistant Chief of Staff for Force Development, Department of the
Army, Washington, D. C. 20310

This headquarters has evaluated subject report and forwarding indorsements and concurs in the report as indorsed.

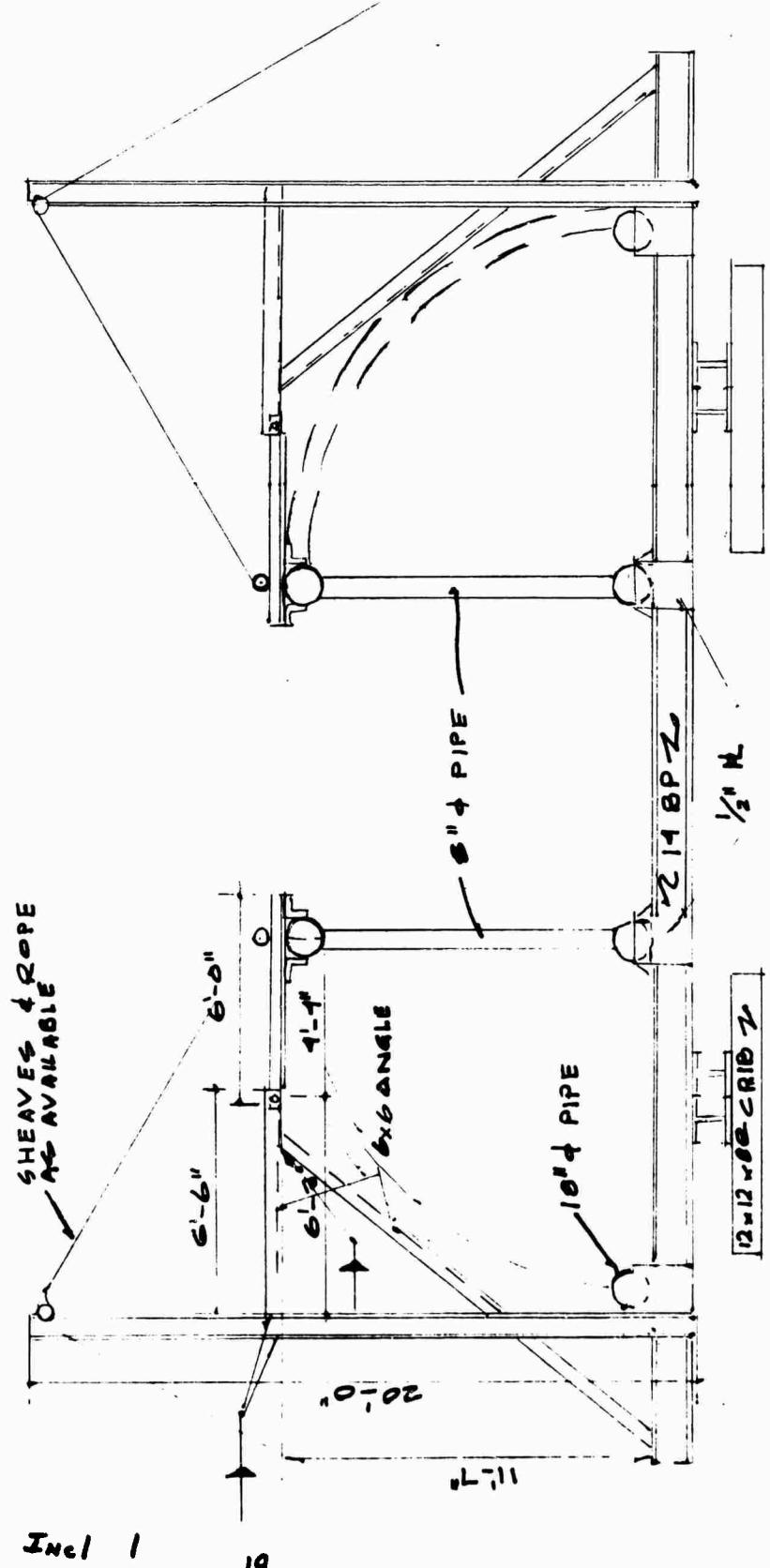
FOR THE COMMANDER IN CHIEF:

K. F. Osbourn

K. F. OSBOURN
MAJ, AGC
Asst AG

JACKET TEMPLATE

END VIEW
SCALE = $\frac{1}{4} = 1'-0"$

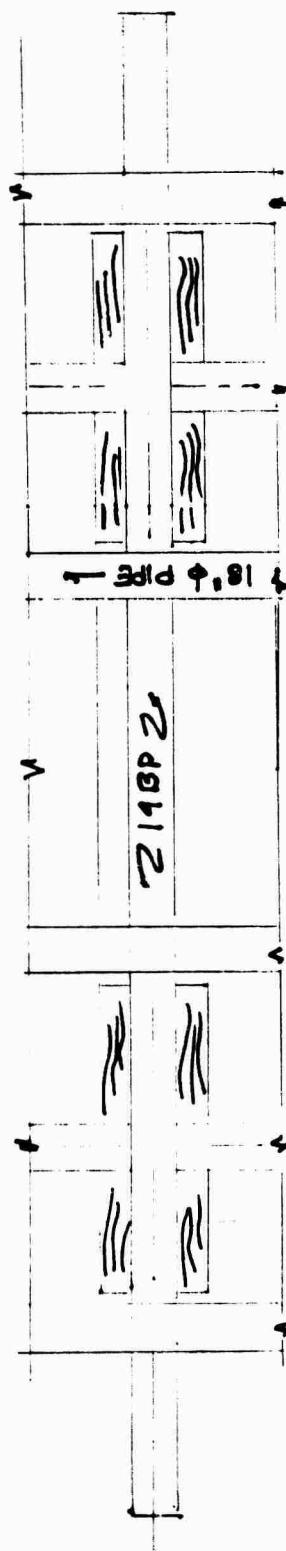


SYMMETRICAL ABOUT CENTER LINE

3-12 x 12 x 8.0 C2187

ROUT

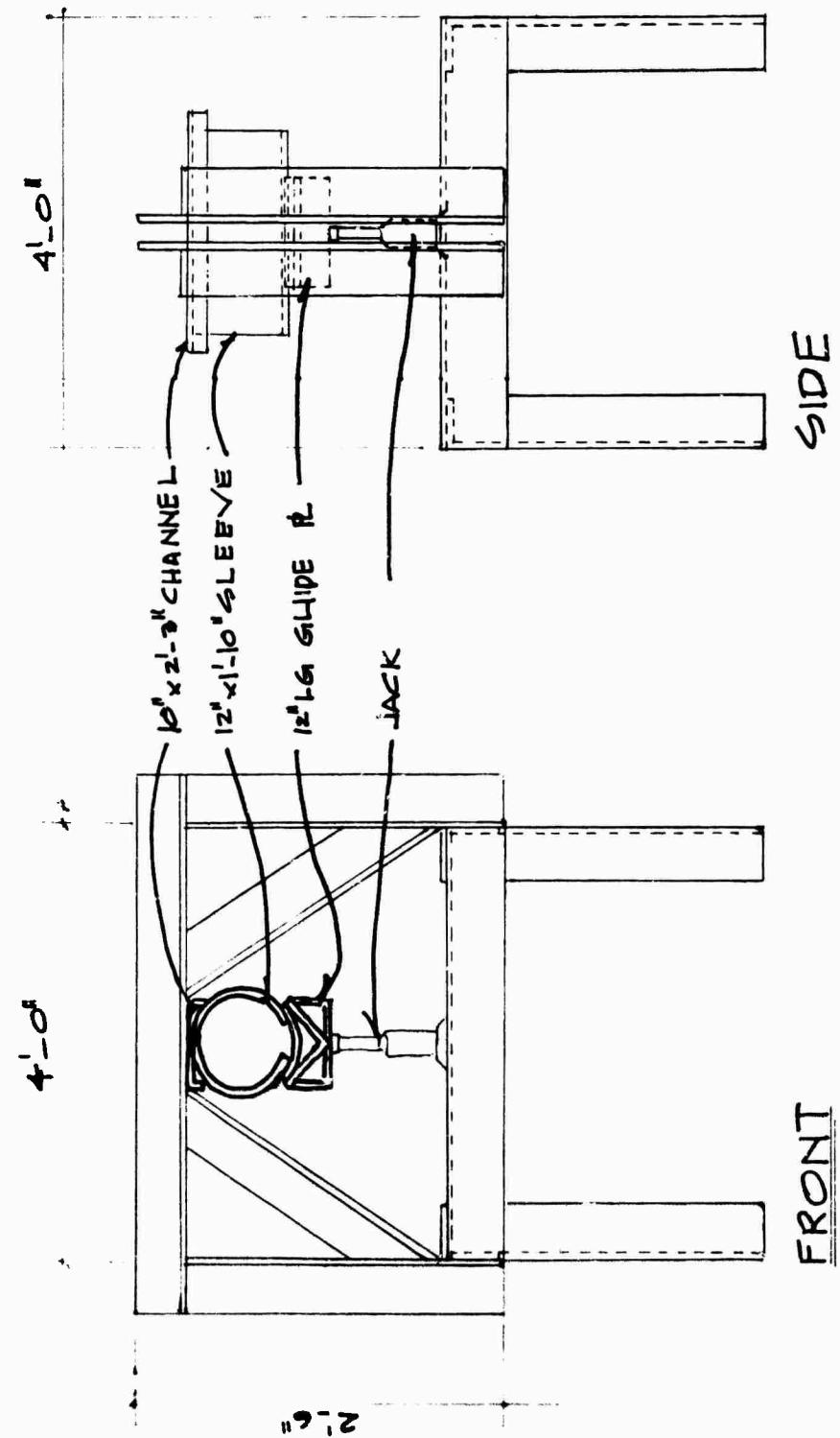
"0-81" "0-100" "0-161"



Architectural floor plan showing the layout of a building with various rooms and exterior features. The plan includes the following dimensions and labels:

- Exterior Dimensions:** 5'-0" x 40'-0"
- Rooms:**
 - 14BP S (bottom left)
 - 14BP 1 (top left)
 - 14BP 2 (middle left)
 - 14BP 3 (top right)
 - 14BP 4 (middle right)
 - 14BP 5 (bottom right)
- Walls:** 1'-0" thick walls are indicated on the left and right sides.
- Doors:** A 3'-0" wide door is located on the left side between 14BP S and 14BP 2.
- Windows:** Several windows are shown with dimensions: 5'-0" x 6'-0" (top left), 5'-0" x 6'-0" (top right), 5'-0" x 6'-0" (middle left), 5'-0" x 6'-0" (middle right), and 5'-0" x 6'-0" (bottom right).
- Stairs:** Stairs are located on the right side, labeled "10 LO" and "X" 1/2 STUFFED" with a height of 10'-0".
- Exterior Features:**
 - A 18" pipe is shown on the left side.
 - A 10x20' CHANNEL is shown on the right side.
 - A 18" pipe is shown on the right side.
 - A 18" pipe is shown on the top right side.
- Overall Dimensions:** The overall width is 5'-0" and the overall depth is 40'-0".

PLAN VIEW SCALE = $\frac{1}{4}$ " = 1'-0"



SLEEVE PRESS
 $\text{SCALE} = 3/4" = 1' 0"$

Incl 2

21

UNCLASSIFIED

Security Classification

DOCUMENT CONTROL DATA - R & D

(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)

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